1064-22-260   **Sasha Lyapina*** (`sashulya@hku.hk`), Department of Mathematics, The University of Hong Kong, Pokfulam, Hong Kong. *The Variety of Lagrangian Subalgebras of Real Semisimple Lie algebras.*

We study the geometry of the variety of Lagrangian subalgebras of a real semisimple Lie algebra. The main motivation for studying Lagrangian subalgebras is through the connection with the theory of Poisson Lie groups. The analogous problem for complex semisimple Lie algebras was studied by Evens and Lu.

We describe the irreducible components of the real algebraic variety of Lagrangian subalgebras. In particular, some irreducible components are compactifications of the corresponding real adjoint group. (Received September 12, 2010)